

## SEQUENCE LISTING

**SEQ ID NO:1**

human CNG2B amino acid sequence

5 MSQDTKVKTTESPPAPSKARKLLPVLDPSPGDYYYWNLNTMVFPVMYNLIILVCRACFPDLQHGYLVAWLVL  
DYTSDLLYLDMVVRFHTGFLEQGILVVDKGRISSRYVRTWSFFLDLASLMPTDVVYVRLGPHTPTLRLNRF  
LRAPRLF EAFDR TETR TAY PNAFRI AKMLY I FVVI HWNSCLYFALSRYLGFRDAWVYPDPAQPGFERLRR  
QYLYSFYFSTLILTTVGDTPPPAREEEYLFMVGD FLLAVMGFATIMGSMSSVIYNMNTADAAFYPDHALVKK  
YMKLQHVNRKLERRIDWYQHLQINKMTNEVA I LQHLPERLRAEVAVSVHLSTLSRVQIFQNC EASLLEEL  
10 VLKLQPQTYSPEYVCRKGDIGQEMYI IREGQLAVVADDGITQYAVLGAGLYFGEISI INIKGNMSGNRRTA  
NIKSLGYSDLFCLSKEDLREVLSEYPQAQTIMEEKGREILLKMNKLDVNAEAAEIALQEATESRLRGLDQQL  
DDLQTKFARLLAELESSALKIAYRIERLEWQ TREWMPMEDLAEADDEGEPEEGTSKDEEGRASQEGPPGPE

**SEQ ID NO:2**

15 complete human CNG2B nucleotide sequence

AGAGGGGAGGAGGAAAACAGAGACAAGACTCAGGCTTCCCTCTGAGGCATGCACCCCCACCTTCTCCAGGGA  
TCTCATTAGAGGTGTTTAGCTGGGCAGGTGTAAGCCCAGGCCCTGGGAGACAGGGCAGAGTGCTAGAGCTAG  
ACTGTCTCCACCCCTTCAGTAGCGCTAGCTCTGGTTGTGTTGCTAAGAGCCCCAAAGACAAAGAAGTCACAG  
20 CAGAAGCCCAACAGCAGCCTCCTTCAGACAGTCAGGCACTAGTGCCCAACTCCAGAAGTCCCCTACAGGCAG  
AGAGGGTGTGGACATCTCACACCCCAGCACACAGACCACAGAACCATGAGCCAGGACACCAAAGTGAAGACAA  
CAGAGTCCAGTCCCCCAGCCCCATCCAAGGCCAGGAAGTTGCTGCCTGTCTGGACCCATCTGGGGATTACT  
ACTACTGGTGGCTGAACACAATGGTCTTCCCAGTCATGTATAACCTCATCATCCTCGTGTGCAGAGCCTGCT  
TCCCCGACTTGCAGCACGGTTATCTGGTGGCCTGGTTGGTGCTGGACTACACGAGTGACCTGCTATACCTAC  
25 TAGACATGGTGGTGCGCTTCCAACAGGATTCTTGGAACAGGGCATCCTGGTGGTGGACAAGGGTAGGATCT  
CGAGTCGCTACGTTTCGCACCTGGAGTTTCTTCTTGACCTGGCTTCCCTGATGCCACAGATGTGGTCTACG  
TGCGGCTGGGCCCCGCACACCCACCCTGAGGCTGAACCGCTTTCTCCGCGCGCCCCGCTCTTCGAGGCCT  
TCGACCGCACAGAGACCCGCACAGCTTACCCAAATGCCTTTCGCATTGCCAAGCTGATGCTTTACATTTTTG  
TCGTCATCCATTGGAACAGCTGCCTATACTTTGCCCTATCCCGGTACCTGGGCTTCGGGCGTGACGCATGGG  
30 TGTACCCGGACCCCGCGCAGCCTGGCTTTGAGCGCCTGCGGCGCCAGTACCTCTATAGCTTTTACTTCTCCA  
CGCTGATACTGACTACAGTGGGCGATACACCGCCGCCAGCCAGGGAAGAAGAGTACCTCTTCATGGTGGGCG  
ACTTCTGCTGGCCGTTCATGGGTTTCGCCACCATCATGGGTAGCATGAGCTCTGTCTATCTACAACATGAACA  
CTGCAGATGCGGCTTTCTACCCAGATCATGCACTGGTGAAGAAGTACATGAAGCTGCAGCACGTCAACCGCA  
AGCTGGAGCGGCGAGTTATTGACTGGTATCAGCACCTGCAGATCAACAAGAAGATGACCAACGAGGTAGCCA  
35 TCTTACAGCACTTGCTGAGCGGCTGCGGGCAGAAGTGGCTGTGTCTGTGCACCTGTCCACTCTGAGCCGGG  
TGCAGATCTTTCAGAACTGTGAGGCCAGCCTGCTGGAGGAGCTGGTGCTGAAGCTGCAGCCCCAGACCTACT  
CACCAGGTGAATATGTATGCCGCAAAGGAGACATTGGCCAAGAGATGTACATCATCCGAGAGGGTCAACTGG  
CCGTGGTGGCAGATGATGGTATCACACAGTATGCTGTGCTCGGTGCAGGGCTCTACTTTGGGGAGATCAGCA  
TCATCAACATCAAAGGGAACATGTCTGGGAACCGCCGCACAGCCAACATCAAGAGCCTAGGTTATTTCAGACC

TATTCTGCCTGAGCAAGGAGGACCTGCGGGAGGTGCTGAGCGAGTATCCACAAGCACAGACCATCATGGAGG  
 AGAAAGGACGTGAGATCCTGCTGAAAAATGAACAAGTTGGACGTGAATGCTGAGGCAGCTGAGATCGCCCTGC  
 AGGAGGCCACAGAGTCCCGGCTACGAGGCCTAGACCAGCAGCTGGATGATCTACAGACCAAGTTTGCTCGCC  
 TCCTGGCTGAGCTGGAGTCCAGCGCACTTAAGATTGCTTACCGCATTGAACGGCTGGAGTGGCAGACTCGAG  
 5 AGTGGCCAATGCCCCGAGGACCTGGCTGAGGCTGATGACGAGGGTGAGCCTGAGGAGGGAACTTCCAAAGATG  
 AAGAGGGCAGGGCCAGCCAGGAGGGACCCCCAGGTCCAGAGTGACCCCATCCCCATCCCCAGGATTCCCACC  
 TCCTAGTGAATCCAGAGTTGTAGTAAAGCCTAACTGCTGCAACTCTGTTCATCCTGTCTGCGAGATCACAGAC  
 ACAGGAGCGAATTGGTCTGTAGATGCCCAGCTAGAGATATAGGAGTTTAACGCACATTCAGCCCCCACTTAC  
 CAGTACACACACACACACACACACACACATTGTGCTCATAGACCTGTTGGCCCCAAGACTGTGCATTCCAT  
 10 CTAA

### SEQ ID NO:3

human CNG2B coding sequence

15 ATGAGCCAGGACACCAAAGTGAAGACAACAGAGTCCAGTCCCCCAGCCCCATCCAAGGCCAGGAAGTTGCTG  
 CCTGTCCTGGACCCATCTGGGGATTACTACTTGGTGGCTGAACACAATGGTCTTCCCAGTCATGTATAAC  
 CTCATCATCCTCGTGTGCAGAGCCTGCTTCCCCGACTTGCGAGCAGGTTATCTGGTGGCCTGGTTGGTGGCTG  
 GACTACACGAGTGACCTGCTATACCTACTAGACATGGTGGTGGCTTCCACACAGGATTCTTGGAACAGGGC  
 ATCCTGGTGGTGGACAAGGGTAGGATCTCGAGTCGCTACGTTCGCACCTGGAGTTTCTTCTTGGACCTGGCT  
 20 TCCCTGATGCCCACAGATGTGGTCTACGTGCGGCTGGGCCCCGCACACACCCACCCCTGAGGCTGAACCGCTTT  
 CTCCGCGCGCCCCGCTCTTCGAGGCCTTCGACCGCACAGAGACCCGCACAGCTTACCCAAATGCCTTTTCGC  
 ATTGCCAAGCTGATGCTTTACATTTTGTGTCATCCATTGGAACAGCTGCCTATACTTTGCCCTATCCCGG  
 TACCTGGGCTTCGGGCGTGACGCATGGGTGTACCCGGACCCCGCGCAGCCTGGCTTTGAGCGCCTGCGGCGC  
 CAGTACCTCTATAGCTTTTACTTCTCCACGCTGATACTGACTACAGTGGGCGATACACCGCCGCCAGCCAGG  
 25 GAAGAAGAGTACCTCTTCATGGTGGGCGACTTCCTGCTGGCCGTCATGGGTTTCGCCACCATCATGGGTAGC  
 ATGAGCTCTGTTCATCTACAACATGAACACTGCAGATGCGGCTTTCTACCCAGATCATGCACTGGTGAAGAAG  
 TACATGAAGCTGCAGCACGTCAACCGCAAGCTGGAGCGGCGAGTTATTGACTGGTATCAGCACCTGCAGATC  
 AACAAGAAGATGACCAACGAGGTAGCCATCTTACAGCACTTGCTGAGCGGCTGCGGGCAGAAGTGGCTGTG  
 TCTGTGCACCTGTCCACTCTGAGCCGGGTGCAGATCTTTCAGAACTGTGAGGCCAGCCTGCTGGAGGAGCTG  
 30 GTGCTGAAGCTGCAGCCCCAGACCTACTCACCAGGTGAATATGTATGCCGCAAAGGAGACATTGGCCAAGAG  
 ATGTACATCATCCGAGAGGGTCAACTGGCCGTGGTGGCAGATGATGGTATCACACAGTATGCTGTGCTCGGT  
 GCAGGGCTCTACTTTGGGGAGATCAGCATCATCAACATCAAAGGGAACATGTCTGGGAACCGCCGCACAGCC  
 AACATCAAGAGCCTAGGTTATTTCAGACCTATTCTGCCTGAGCAAGGAGGACCTGCGGGAGGTGCTGAGCGAG  
 TATCCACAAGCACAGACCATCATGGAGGAGAAAGGACGTGAGATCCTGCTGAAAAATGAACAAGTTGGACGTG  
 35 AATGCTGAGGCAGCTGAGATCGCCCTGCAGGAGGCCACAGAGTCCCGGCTACGAGGCCTAGACCAGCAGCTG  
 GATGATCTACAGACCAAGTTTGCTCGCCTCCTGGCTGAGCTGGAGTCCAGCGCACTTAAGATTGCTTACCGC  
 ATTGAACGGCTGGAGTGGCAGACTCGAGAGTGGCCAATGCCCGAGGACCTGGCTGAGGCTGATGACGAGGGT  
 GAGCCTGAGGAGGGAACCTTCCAAAGATGAAGAGGGCAGGGCCAGCCAGGAGGGACCCCCAGGTCCAGAGTGA

**SEQ ID NO:4**

(sense strand primer)

GCAGATCTTTCAGAACTGTGAGGCCA

5

**SEQ ID NO:5**

Oligo 2 (antisense strand primer)

CCTGCCCTCTTCATCTTTGGAAGTTC

10

**SEQ ID NO:6**

Oligo 3 (sense strand primer)

GCCAACATCAAGAGCCTAGGTTATTC

15

**SEQ ID NO:7**

Oligo 4 nested gene specific oligo (sense strand primer)

GGATGATCTACAGACCAAGTTTGCTCG

20

**SEQ ID NO:8**

(sense strand primer)

ATGAGCCAGGACACCAAAGTGAAGAC

25

**SEQ ID NO:9**

Oligo 6 (antisense primer specific to human CNG2B)

GTTGATGATGCTGATCTCCCCAAAG

30

**SEQ ID NO:10**

Oligo 7 (CNG2B-specific antisense strand primer)

GGATGATGAGGTTATACATGACTGGG

5 AGGCTAGCAACTTCCTGGCCTTGGAT

10 GCGAAAGCTTCCACCATGAGCCAGGACACCAAAGTG

15 CATGTCTAGAATGGGGATGGGGTCACTCTGGACCT

20 GCAGATCTTCCAGAACTGTAAGGCCA

25 ATGAGCCAGGACGGNAARGTNAARAC